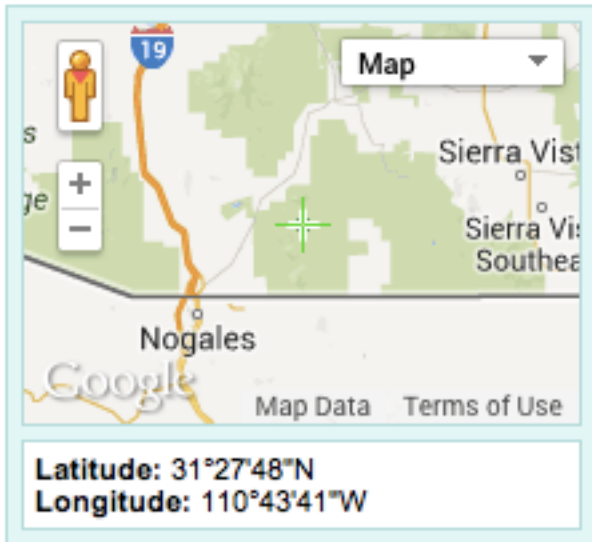


Trench Mine, Trench and Josephine Mine group (Josephine Mines; Trench group of claims; Lunch Cans prospect), Alum Gulch, Harshaw District, Patagonia Mts, Santa Cruz Co., Arizona, USA



Latitude: 31°27'48"N
Longitude: 110°43'41"W

‡Ref.: The Resources of Arizona - A Manual of Reliable Information Concerning the Territory, compiled by Patrick Hamilton (1881), Scottsdale, AZ: 43-44.

The History of Arizona, 2nd. State legislature, Chap. X: 125

Schrader, F.C. & J.M. Hill (1915), Mineral deposits of the Santa Rita and Patagonia Mountains, Arizona, USGS Bull. 582: 253-254.

Schrader, F.C. (1917), The geologic distribution and genesis of the metals in the Santa Rita-Patagonia Mountains, Arizona, Economic Geology: 12: 237-269.

Hewett, D.F. & O.N. Rove (1930), Occurrence and relations of alabandite, Econ.Geol.: 25: 36-56.

Kartchner, W.E. (1944) The geology and ore deposits of a portion of the Harshaw district, Patagonia Mountains, Arizona: Tucson, University of Arizona, Ph.D. dissertation, 100 p.

Galbraith, F.W. (1947), Minerals of Arizona, Arizona Bureau of Mines Bull. 153: 18.

Galbraith, F.W. & D.J. Brennan (1959), Minerals of Arizona: 48, 73.

Keith, Stanton B. (1975), Arizona Bureau of Mines Bull. 191, Index of Mining Properties in Santa Cruz County Arizona: 59 (Table 4).

Anthony, J.W., et al (1995), Mineralogy of Arizona, 3rd.ed.: 104, 229, 323, 344, 353.

U.S. Bureau of Mines Coronado National Forest Study.

Arizona Department of Mineral Resources Trench Mill file.

Arizona Bureau of Mines file data.

MRDS database Dep. ID file #10186789, MRDS ID [M899918](#), MAS ID #0040230083.

A former underground Pb-Zn-Ag-Cu-Au-Mn mine located in the SE¹/₄NE¹/₄ sec. 5, T.23S., R.16E. (protracted), 1¹/₄ miles NW of Harshaw and 1/4 mile SE of the Red Bird Mine on an eastern tributary of Alum Gulch just below the 5,000 foot contour, on National Forest land. Discovered in the 1850's or earlier and worked in 1859 by Colonel Titus. Patented prior to 1872 by J.B. Hagan. In the middle and late seventies it was extensively worked by Señor Pádrés. In 1880 the owner was the Hearst estate, of California. Worked early by missionaries. Owned at times, or in part, by Messrs Archibald, Gardiner & Hop; Col. Titus; Hogan; Powers; Farrell; Morrison; Richardson; Trench Consolidated Mining Co.; Wilson; Trench Mining Co.; Gold Canyon Mining Co.; and the American Smelting & Refining Co. (ASARCO).

Mineralization is a lensing, banded, porous, and drusy vein containing argentiferous cerussite, smithsonite, manganese carbonate (rhodochrosite) and oxides, and iron oxides with quartz in oxidized zone and base metal and other sulfides and sulfosalts in depth. Wall rock is Cretaceous andesite cut by rhyolite intrusions. Strong pyrite gossan. This vein can be traced for over 20,000 feet (6,400 meters) on surface.

The deposits are contained in a fissure vein which dips 60°NNE. in diorite that is intruded by rhyolite nearby. The vein ranges from 1 to 5 feet in width. The vein and ore are banded, porous, and drusy.

Workings include a 400 foot deep main shaft (circa 1880) with several levels and 2 tunnels at 200 and 300 feet long (1881). Worked from the late 1850's to the late 1890's, and from 1918 to 1945. The group (including the Josephine Mine) produced some 237,000 tons of ore averaging about 8.5% Pb, 6.3% Zn, 13 oz. Ag/T and minor copper and gold.

TRENCH MINE WORKINGS INCLUDED 700 FT VERTICAL SHAFT

Mineral List

Mineral list contains entries from the region specified including sub-localities

17 entries listed. 11 valid minerals.

Localities in this Region

The above list contains all mineral locality references listed on mindat.org. This does not claim to be a complete list. If you know of more minerals from this site, please [register](#) so you can add to our database. This locality information is for reference purposes only. You should never attempt to visit any sites listed in mindat.org without first ensuring that you have the permission of the land and/or mineral rights holders for access and that you are aware of all safety precautions necessary.

source: <http://www.mindat.org/loc-59181.html>